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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/081,121

02/22/2002

Jeffrey W. Scott

SILA:095

9531

7590

06/30/2005

O'KEEFE, EGAN & PETERMAN, L.L.P.

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Austin, TX 78746

EXAMINER

TRAN, TUAN A

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/081,121	Applicant(s) SCOTT ET AL.	
	Examiner Tuan A. Tran	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in the Applicant's response to restriction requirement filed on 04/25/2005.

The Application has been amended as follows:

#### **IN THE CLAIMS:**

Claims 1-26 and 52-76 have been canceled.

### ***Election/Restrictions***

Applicant's election without traverse of Group II (claims 27-51) in the reply filed on 04/25/2005 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 27-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciccarelli et al. (6,175,279) in view of Pangal et al. (6,445,170) and further in view of Burger, Jr. et al. (6,275,090).

Regarding claims 27-28 and 40, Ciccarelli discloses a radio-frequency (RF) apparatus (See fig. 2), comprising a first integrated circuit 1280 configured for providing reference current and voltage including a reference current generator (See figs. 2, 5 and col. 7 lines 38-44). However, Ciccarelli does not mention that the reference current generator comprises such components as claimed. Pangal teaches a reference current generator (See fig. 6) configured to generate a reference output current 620, comprising: a reference voltage source 106 configured to provide a reference voltage; a controllable current source 608, 602 configured to provide the reference output current in response to a first plurality of signals 612, 614; and a first controller 606 configured to provide the first plurality of signals 612, 614, the first plurality of signals being derived from the reference voltage and the reference output current, wherein a noise content of the reference output current is inherently lower than a noise content of the reference voltage (See fig. 6 and col. 6 line 51 to col. 7 line 35). Burger teaches a reference voltage generator (See fig. 1) configured to generate a reference output voltage, comprising: a controllable voltage source configured to provide the reference output voltage VR in response to a second plurality of signals 115, 116, 117; and a second controller 113 configured to provide the second plurality of signals 115, 116, 117, the second plurality of signals being derived from the reference output voltage VR and a reference voltage VBG, wherein the reference voltage VBG is a low-drift band-gap

reference voltage and a noise content of the reference output voltage is inherently lower than a noise content of the reference voltage (See fig. 1 and col. 2 lines 8-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Pangal in configuring the first integrated circuit as disclosed by Ciccarelli with the reference current generator and further to apply the teachings of Burger in modifying the reference voltage source as disclosed by Pangal for the advantage of providing precision constant reference current and voltage to the circuitry.

Regarding claims 29 and 41, Ciccarelli & Pangal & Burger disclose as cited in claims 28 and 40. Pangal further discloses the reference output current is calibrated by calibrating the first plurality of signals (See col. 7 lines 5-15) and Burger further discloses the reference output voltage is calibrated by the second plurality of signals (See fig. 2 and col. 2 line 43 to col. 3 line 3).

Regarding claims 30 and 42, Ciccarelli & Pangal & Burger disclose as cited in claims 29 and 41. Burger further discloses the plurality of signals are configured to be held constant after calibrating (See col. 3 lines 4-7).

Regarding claims 31-32 and 43-44, Ciccarelli & Pangal & Burger disclose as cited in claims 30 and 41. Pangal further discloses the controllable current source 602, 608 comprises a first adjustable resistor 302, 306, 310 wherein the first adjustable resistor 302, 306, 310 inherently comprises a first plurality of switchable resistors configured to adjust a resistance of the first adjustable resistor in response to the first plurality of signals (See fig. 6); and Burger further discloses the controllable voltage

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source comprises a second adjustable resistor wherein the second adjustable resistor comprises a second plurality of switchable resistors 103-106 configured to adjust a resistance of the second adjustable resistor in response to the second plurality of signals (See fig. 1).

Regarding claims 33 and 45, Ciccarelli & Pangal & Burger disclose as cited in claims 32 and 44. Pangal further discloses the first controller uses successive approximation to generate the first plurality of signals (See col. 7 lines 7-11) and Burger further discloses the second controller uses successive approximation to generate the second plurality of signals (See fig. 2 and col. 2 line 42 to col. 3 line 26).

Regarding claim 34, Ciccarelli & Pangal & Burger disclose as cited in claim 33. Burger further discloses the reference voltage source comprises a band-gap reference (See fig. 1 and col. 2 lines 15-16).

Regarding claim 46, Ciccarelli & Pangal & Burger disclose as cited in claim 45. Burger further discloses the controllable voltage source is further configured to provide the reference output voltage in response to a signal derived from the reference output current (See fig. 1).

Regarding claims 35 and 47, Ciccarelli & Pangal & Burger disclose as cited in claims 34 and 46. Ciccarelli further discloses the first integrated circuit further comprises radio-frequency receiver circuitry (See fig. 2).

Regarding claims 36 and 48, Ciccarelli & Pangal & Burger disclose as cited in claims 35 and 47. Ciccarelli further discloses a second integrated circuit coupled to the first integrated circuit, the second integrated circuit comprising digital signal processing

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circuitry, the digital signal processing circuitry further configured to accept a digital output of the radio-frequency receiver circuitry (See fig. 2).

Regarding claims 37 and 49, Ciccarelli & Pangal & Burger disclose as cited in claims 36 and 48. Ciccarelli further discloses the reference current and voltage generators supply the reference output current and voltage to the radio-frequency receiver circuitry (See fig. 2 and col. 7 lines 38-42).

Regarding claims 38 and 50, Ciccarelli & Pangal & Burger disclose as cited in claims 37 and 49. The radio-frequency receiver circuitry and the reference current and voltage generators are inherently power up before the reception of a burst by the radio-frequency receiver circuitry in order to properly receive and process incoming data signals.

Regarding claims 39 and 51, Ciccarelli & Pangal & Burger disclose as cited in claims 38 and 50. Burger further discloses the reference output voltage and current are calibrated at power up (See col. 3 lines 14-17).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kimura (5,910,749); Oguey (5,949,278); Brown (5,291,123); Dutt et al. (5,612,613).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(571) 272-7858**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Nick Corsaro**, can be reached at **(571) 272-7876**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

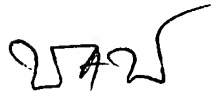
Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Tuan Tran

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**NICK CORSARO  
PRIMARY EXAMINER**



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